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TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>	Application Number	09/927,422
	Filing Date	August 10, 2001
	First Named Inventor	Gary VAN NEST
	Group Art Unit	1632
	Examiner Name	To Be Assigned
Total Number Of Pages In This Submission	28 + 14 REFS	Attorney Docket No. 377882001420

ENCLOSURES (check all that apply)		
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SIGNATURE OF APPLICANT, ATTORNEY OR AGENT	
Firm or Individual Name	Morrison & Foerster LLP, 755 Page Mill Rd, Palo Alto, CA 94304-1018 Karen R. Zachow, Reg. No. 46,332
Signature	<i>Karen R. Zachow</i>
Date	November 13, 2001

CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"	
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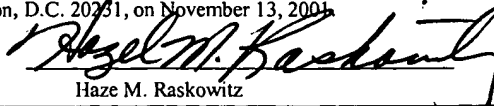


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PATENT
Docket No. 377882001420

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Haze M. Raskowitz

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Gary VAN NEST et al.

Serial No.: 09/927,422

Filing Date: August 10, 2001

For: BIODEGRADABLE
IMMUNOMODULATORY
FORMULATIONS AND METHODS
FOR USE THEREOF

Examiner: To Be Assigned

Group Art Unit: 1632

**INFORMATION DISCLOSURE
STATEMENT UNDER 37 C.F.R. § 1.97 AND § 1.98**

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, Applicants submit for consideration in the above-identified application the documents listed on the attached Form PTO-1449. Copies of the documents numbered 18-21, 42, 43, 46-51, 96, and 170 are submitted herewith. Copies of the documents numbered 1-17, 22-41, 44, 45, 52-95, 97-169 and 171-189 were previously submitted in an Information Disclosure Statement and/or Office Action, directed to the related application Serial Number 09/802,359, filed March 9, 2001, and, accordingly, copies are not included herewith. This protocol conforms with 37 C.F.R. § 1.98(d) and M.P.E.P. 609(A)(2). The

Examiner is requested to make these documents of record in the application.

This Information Disclosure Statement is submitted:

- With the application; accordingly, no fee or separate requirements are required.
- Within three months of the application filing date or before mailing of a first Office Action on the merits; accordingly, no fee or separate requirements are required.
- After receipt of a first Office Action on the merits but before mailing of a final Office Action or Notice of Allowance.
 - A fee is required. A check in the amount of is enclosed.
 - A fee is required. Accordingly, a Fee Transmittal form (PTO/SB/17) is attached to this submission in duplicate.
 - A Certification under 37 C.F.R. § 1.97(e) is provided below; accordingly; no fee is believed to be due.
- After mailing of a final Office Action or Notice of Allowance, but before payment of the issue fee. Accordingly, a Petition requesting consideration of the Information Disclosure Statement, an authorization to charge our deposit account, and a Certification under 37 C.F.R. § 1.97(e) are provided herein.

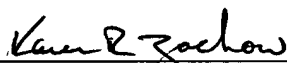
Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

The information contained in this Information Disclosure Statement under 37 C.F.R. § 1.97 is to the best of my knowledge and is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

In the unlikely event that the Patent Office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorize the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing 377882001420. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: November 13, 2001

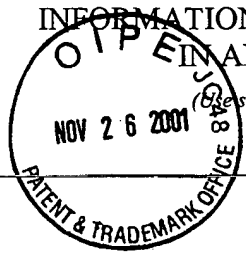
Respectfully submitted,

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Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION (See several sheets if necessary)	Docket Number 377882001420	Application Number 09/927,422
	Applicant Gary VAN NEST et al.	
	Filing Date August 10, 2001	Group Art Unit 1632
	Mailing Date November 13, 2001	RECEIVED NOV 2 7 2001



U.S. PATENT DOCUMENTS

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Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date If Appropriate
	1.	07/03/1984	4,458,006	Döenges et al.			
	2.	03/17/1987	4,650,675	Borel et al.			
	3.	07/18/1989	4,849,513	Smith et al.			
	4.	03/20/1990	4,910,300	Urdea et al.			
	5.	08/14/1990	4,948,882	Ruth			
	6.	05/14/1991	5,015,733	Smith et al.			
	7.	03/03/1992	5,093,232	Urdea et al.			
	8.	06/02/1992	5,118,800	Smith et al.			
	9.	06/02/1992	5,118,802	Smith et al.			
	10.	06/23/1992	5,124,246	Urdea et al.			
	11.	02/21/1995	5,391,723	Priest			
	12.	09/26/1995	5,453,496	Caruthers et al.			
	13.	01/16/1996	5,484,596	Hanna, Jr. et al.			
	14.	09/02/1997	5,663,153	Hutcherson et al.			
	15.	03/03/1998	5,723,335	Hutcherson et al.			
	16.	12/15/1998	5,849,719	Carson et al.			
	17.	01/16/2001	6,174,872	Carson et al.			
	18.	02/27/2001	6,194,388 B1	Krieg et al.			
	19.	03/27/2001	6,207,646 B1	Krieg et al.			
	20.	04/10/2001	6,214,806 B1	Krieg et al.			
	21.	05/29/2001	6,239,116 B1	Krieg et al.			

FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO
	22.	01/29/1992	0 468 520 A2,A3	Europe			

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Form PTO-1449

Docket Number 377882001420

Application Number 09/927,422

**INFORMATION DISCLOSURE CITATION
IN AN APPLICATION**

Applicant

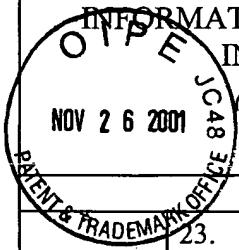
Gary VAN NEST et al.

(Use several sheets if necessary)

Filing Date August 10, 2001

Group Art Unit 1632

Mailing Date November 13, 2001



23.	02/01/1996	WO 96/02555 A1	WIPO			
24.	08/07/1997	WO 97/28259 A1	WIPO			
25.	04/23/1998	WO 98/16247 A1	WIPO			
26.	05/07/1998	WO 98/18810 A1	WIPO			
27.	09/03/1998	WO 98/37919 A1	WIPO			
28.	09/17/1998	WO 98/40100 A1	WIPO			
29.	11/26/1998	WO 98/52581 A1	WIPO			
30.	11/26/1998	WO 98/52962 A1	WIPO			
31.	12/10/1998	WO 98/55495 A2,A3	WIPO			
32.	12/10/1998	WO 98/55609 A1	WIPO			
33.	03/11/1999	WO 99/11275 A2,A3	WIPO			
34.	07/08/1999	WO 99/33488 A2,A3	WIPO			
35.	07/08/1999	WO 99/33868 A2,A3	WIPO			
36.	10/14/1999	WO 99/51259 A2,A3	WIPO			
37.	11/11/1999	WO 99/56755 A1	WIPO			
38.	12/09/1999	WO 99/62923 A2,A3	WIPO			
39.	02/10/2000	WO 00/06588 A1	WIPO			
40.	03/30/2000	WO 00/16804 A1	WIPO			
41.	04/20/2000	WO 00/21556 A1	WIPO			
42.	09/21/2000	WO 00/54803 A2	WIPO			
43.	10/19/2000	WO 00/61161 A2	WIPO			
44.	11/09/2000	WO 00/67023 A1	WIPO			
45.	02/22/2001	WO 01/12223 A2	WIPO			
46.	03/08/2001	WO 01/15726 A2	WIPO			
47.	04/05/2001	WO 01/22972 A2	WIPO			
48.	04/05/2001	WO 01/22990 A2	WIPO			
49.	05/25/2001	WO 01/35991 A2	WIPO			
50.	07/19/2001	WO 01/51500 A1	WIPO			
51.	08/02/2001	WO 01/54720 A1	WIPO			

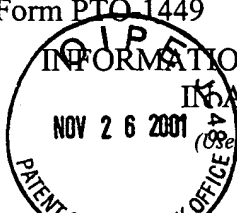
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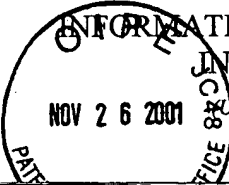
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Examiner Initials	Ref. No.	Title
	52.	Asanuma, H. et al., (1995) "Cross-protection against influenza virus infection in mice vaccinated by combined nasal/subcutaneous administration" <i>Vaccine</i> 13:3-5.
	53.	Agrawal et al. (1986). "Efficient methods for attaching non-radioactive labels to the 5' ends of synthetic oligodeoxyribonucleotides," <i>Nucleic Acids Res.</i> 14:6227-6245.
	54.	Ahmeida, E.T.S. Ben, (1993). "Immunopotential of local and systemic humoral immune responses by ISCOMs, liposomes and FCA: role in protection against influenza A in mice," <i>Vaccine</i> 11(13):1302-1309.
	55.	Atherton et al. (1981). "Synthesis of a 21-residue fragment of human proinsulin by the polyamide solid phase method," <i>Hoppe-Seylers Z. Physiol. Chem.</i> 362:833-839.
	56.	Ballas et al. (1996). "Induction of NK activity in murine and human cells by CpG motifs in oligodeoxynucleotides and bacterial DNA," <i>J.Immunol.</i> 157:1840-1845.
	57.	Benoit et al. (1987). "Peptides. Strategies for antibody production and radioimmunoassays," <i>Neuromethods</i> 6:43-72.
	58.	Bischoff et al. (1987). "Introduction of 5'-terminal functional groups into synthetic oligonucleotides for selective immobilization," <i>Analytical Biochemistry</i> 164:336-344.
	59.	Blanks et al. (1988). "An oligodeoxynucleotide affinity column for the isolation of sequence specific DNA binding proteins," <i>Nucleic Acids Res.</i> 16:10283-10299.
	60.	Boujrad et al. (1993). "Inhibition of hormone-stimulated steroidogenesis in cultured Leydig tumor cells by a cholesterol-linked phosphorothioate oligodeoxynucleotide antisense to diazepam-binding inhibitor," <i>Proc. Natl. Acad. Sci. USA</i> 90:5728-5731.
	61.	Branda et al. (1993). "Immune stimulation by an antisense oligomer complementary to the <i>rev</i> gene of HIV-1," <i>Biochem. Pharmacol.</i> 45:2037-2043.
	62.	Branda et al. (1996). "Amplification of antibody production by phosphorothioate oligodeoxynucleotides," <i>J. Lab. Clin. Med.</i> 128:329-338.
	63.	Braun et al. (1988). "Immunogenic duplex nucleic acids are nuclease resistant," <i>J. Immunol.</i> 141:2084-2089.
	64.	Brazolot Millan et al. (1998) "CpG DNA can induce strong Th1 humoral and cell-mediated immune responses against hepatitis B surface antigen in young mice," <i>Proc. Natl. Acad. Sci. USA</i> 95:15553-15558.
	65.	Breiteneder et al. (1989). "The gene coding for the major birch pollen allergen <i>Betvl</i> is highly homologous to a pea disease resistance response gene," <i>EMBO J.</i> 8:1935-1938.

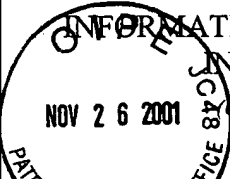
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66.	Broide et al. (1998). "Immunostimulatory DNA sequences inhibit IL-5, eosinophilic inflammation, and airway hyperresponsiveness in mice," <i>J. Immunol.</i> 161:7054-7062.
67.	Broide et al. (1999). "DNA-based immunization for asthma," <i>Int. Arch. Allergy Immunol.</i> 118:453-456.
68.	Carson et al. (1997). "Oligonucleotide adjuvants for T helper 1 (Th1)-specific vaccination," <i>J. Exp. Med.</i> 186:1621-1622.
69.	Chace et al. (1997). "Bacterial DNA-induced NK cell IFN- γ production is dependent on macrophage secretion of IL-12," <i>Clin. Immunol. and Immunopathol.</i> 84:185-193.
70.	Chaturvedi et al. (1996). "Stabilization of triple-stranded oligonucleotide complexes: use of probes containing alternating phosphodiester and stereo-uniform cationic phosphoramidate linkages," <i>Nucleic Acids Res.</i> 24:2318-2323.
71.	Chen et al. (1999). "Enhanced protection against a lethal influenza virus challenge by immunization with both hemagglutinin- and neuraminidase-expressing DNAs," <i>Vaccine</i> 17:653-659.
72.	Chu et al. (1997). "CpG oligodeoxynucleotides act as adjuvants that switch on T helper 1 (Th1) immunity," <i>J. Exp. Med.</i> 186:1623-1631.
73.	Chua et al. (1988). "Sequence analysis of cDNA coding for a major house dust mite allergen, <i>Der p</i> 1 homology with cysteine proteases," <i>J. Exp. Med.</i> 167:175-182.
74.	Chua et al. (1990). "Expression of <i>Dermatophagoides pteronyssinus</i> allergen, <i>Der p</i> II, in <i>Escherichia coli</i> and the binding studies with human IgE," <i>Int. Arch. Allergy Appl. Immunol.</i> 91:124-129.
75.	Connolly, Bernard A. (1985). "Chemical synthesis of oligonucleotides containing a free sulphhydryl group and subsequent attachment of thiol specific probes," <i>Nucleic Acids Res.</i> 13:4485-4502.
76.	Connolly, Bernard A. (1987). "The synthesis of oligonucleotides containing a primary amino group at the 5'-terminus," <i>Nucleic Acids Res.</i> 15:3131-3139.
77.	Corey et al. (1987). "Generation of a hybrid sequence-specific single-stranded deoxyribonuclease," <i>Science</i> 238:1401-1403.
78.	Cowdery et al. (1996). "Bacterial DNA induces NK cells to produce IFN- γ <i>in vivo</i> and increases the toxicity of lipopolysaccharides," <i>J. Immunol.</i> 156:4570-4575.
79.	de Martino et al. (1999). "Low IgG3 and high IgG4 subclass levels in children with advanced human immunodeficiency virus-type 1 infection and elevated IgE levels," <i>Ann. Allergy Asthma Immunol.</i> 83:160-164.
80.	Elkins et al., (1999) "Bacterial DNA comprising CpG motifs stimulates lymphocyte-dependent protection of mice against lethal infection with intracellular bacteria" <i>J. Immunol.</i> 162:2291-2298.

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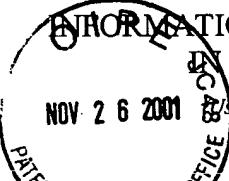
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81.	Elsayed et al. (1991). "The structural requirements of epitopes with IgE binding capacity demonstrated by three major allergens from fish, egg and tree pollen," <i>Scand. J. Clin. Lab. Invest.</i> 51(Suppl.204):17-31.
82.	Fornadley, John (1998). "Allergy immunotherapy," <i>Otolaryngol. Clin. North Am.</i> 31:111-127.
83.	Gao et al., (1995). "Circularization of oligonucleotides by disulfide bridge formation," <i>Nucleic Acids Res.</i> 23(11):2025-2029.
84.	Geoghegan et al. (1992). "Site-directed conjugation of nonpeptide groups to peptides and proteins via periodate oxidation of a 2-amino alcohol. Application to modification at N-terminal serine," <i>Bioconjug. Chem.</i> 3:138-146.
85.	Godard et al. (1995) "Antisense effects of cholesterol-oligodeoxynucleotide conjugates associated with poly(alkylcyanoacrylate) nanoparticles" <i>Eur. J. Biochem.</i> 232:404-410.
86.	Goodchild, John (1990). "Conjugates of oligonucleotides and modified oligonucleotides: A review of their synthesis and properties" <i>Bioconjug. Chem.</i> 1(3):165-187.
87.	Govorkova and Smirnov (1997). "Cross-protection of mice immunized with different influenza A (H2) strains and challenged with viruses of the same HA subtype," <i>Acta Virol.</i> 41:251-257.
88.	Grabarek et al., "Zero-length crosslinking procedure with the use of active esters" (1990) <i>Anal. Biochem.</i> 185:131-135
89.	Gramzinski et al., "Immune response to a hepatitis B DNA vaccine in <i>aotus</i> monkeys: A comparison of vaccine formulation, route, and method of administration" (1998) <i>Mol. Med.</i> 4:109-118
90.	Granioff, Dan M. (1993). "Effect of immunity to the carrier protein on antibody responses to <i>Haemophilus influenzae</i> type b conjugate vaccines," <i>Vaccine</i> 11(1):S46-S51.
91.	Haralambidis et al. (1990). "The synthesis of polyamide-oligonucleotide conjugate molecules," <i>Nucleic Acids Res.</i> 18:493-499.
92.	Haralambidis et al. (1990). "The preparation of polyamide-oligonucleotide probes containing multiple non-radioactive labels," <i>Nucleic Acids Res.</i> 18:501-505.
93.	Horner et al. (1998). "Rapid communication: Immunostimulatory DNA is a potent mucosal adjuvant," <i>Cell Immunol.</i> 190:77-82.
94.	Jäger et al. (1988). "Oligonucleotide N-alkylphosphoramidates: Synthesis and binding to polynucleotides," <i>Biochem.</i> 27:7237-7246.
95.	Jakob et al. (1998). "Activation of cutaneous dendritic cells by CpG-containing oligodeoxynucleotides: A role for dendritic cells in the augmentation of Th1 responses by immunostimulatory DNA," <i>J. Immunol.</i> 161:3042-3049.

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96.	Kandimalla, E.R. et al., (2001) "Effect of chemical modifications of cytosine and guanine in a CpG-motif of oligonucleotides: structure-immunostimulatory activity relationships" <i>Bioorg. Med. Chem.</i> 9:807-813.
97.	Kataoka et al. (1992). "Antitumor activity of synthetic oligonucleotides with sequences from cDNA encoding proteins of <i>mycobacterium bovis</i> BCG," <i>Jpn. J. Cancer Res.</i> 83:244-247.
98.	Kikuta, K. et al., (1990) "Cross-protection against influenza B type virus infection by intranasal inoculation of the HA vaccines combined with cholera toxin B subunit <i>Vaccine</i> 8:595-599
99.	Kimura et al. (1994). "Binding of oligoguanylate to scavenger receptors is required for oligonucleotides to augment NK cell activity and induce IFN," <i>J. Biochem. (Tokyo)</i> 116:991-994.
100.	Kline et al. (1997). "Immune redirection by CpG oligonucleotides conversion of a Th2 response to a Th1 response in a murine model of asthma," <i>J. Invest. Med.</i> 45(3):282A.
101.	Klinman et al. (1996). "CpG motifs present in bacterial DNA rapidly induce lymphocytes to secrete interleukin 6, interleukin 12, and interferon γ ," <i>Proc. Natl. Acad. Sci. USA</i> 93:2879-2883.
102.	Klinman et al., (1997). "Contribution of CpG motifs to the immunogenicity of DNA vaccines," <i>J. Immunol.</i> 158:3635-3639.
103.	Kodihalli et al., (1997). "Cross-protection among lethal H5N2 influenza viruses induced by DNA vaccine to the hemagglutinin," <i>J. Virol.</i> 71(5):3391-3396.
104.	Kovarik et al. (1999). "CpG oligodeoxynucleotides can circumvent the Th2 polarization of neonatal responses to vaccines but may fail to fully redirect Th2 responses established by neonatal priming," <i>J. Immunol.</i> 162:1611-1617.
105.	Kremsky et al. (1987). "Immobilization of DNA via oligonucleotides containing an aldehyde or carboxylic acid group at the 5' terminus," <i>Nucleic Acids Res.</i> 15:2891-2909.
106.	Krieg, Arthur M. (1996). "Lymphocyte activation by CpG dinucleotide motifs in prokaryotic DNA," <i>Trends in Microbiology</i> 4:73-77.
107.	Krieg, Arthur M. (1998). "Leukocyte stimulation by oligodeoxynucleotides" Chapter 24 in <i>Applied Antisense Oligonucleotide Technology</i> . C.A. Stein et al. eds. Wiley-Liss, Inc.: pp. 431-448.
108.	Krieg et al. (1989). "A role for endogenous retroviral sequences in the regulation of lymphocyte activation," <i>J. Immunol.</i> 143:2448-2451.
109.	Krieg et al. (1995). "CpG motifs in bacterial DNA trigger direct B-cell activation" <i>Nature</i> 374:546-549.
110.	Krieg et al. (1996). "Oligodeoxynucleotide modifications determine the magnitude of B cell stimulation by CpG motifs," <i>Antisense & Nucleic Acid Drug Dev.</i> 6:133-139.

EXAMINER:	DATE CONSIDERED:
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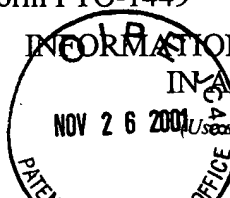
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	Applicant Gary VAN NEST et al.	
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	Mailing Date November 13, 2001	

111.	Krieg et al., (1998). "The role of CpG dinucleotides in DNA vaccines" <i>Trends Microbiol.</i> 6:23-27
112.	Krieg et al., "CpG DNA induces sustained IL-12 expression in vivo and resistance to <i>listeria monocytogenes</i> challenge" (1998) <i>J. Immunol.</i> 161:2428-2434
113.	Krieg et al., "Sequence motifs in adenoviral DNA block immune activation by stimulatory CpG motifs" (1998) <i>Proc. Natl. Acad. Sci. USA</i> 95:12631-12636
114.	Krieg et al., (1999) "CpG DNA: a novel immunomodulator" <i>Trends Microbiol.</i> 7(2):64-65.
115.	Latimer et al., "Specificity of monoclonal antibodies produced against phosphorothioate and ribo modified DNAs" (1995) <i>Mol. Immunol.</i> 32:1057-1064
116.	Lea et al., "Cloning and sequencing of cDNAs encoding the human sperm protein, Sp17" (1996) <i>Biochim. Biophys. Acta</i> 1307:263-266
117.	Leclerc et al., (1997) "The preferential induction of a TH1 immune response by DNA-based immunization is mediated by the immunostimulatory effect of plasmid DNA" <i>Cell. Immunol.</i> 179:97-106.
118.	Liang, Hua et al. (1996). "Activation of human B cells by phosphorothioate oligodeoxynucleotides," <i>J. Clin. Invest.</i> 98(5):1119-1129.
119.	Lipford et al., "Immunostimulatory DNA: sequence-dependent production of potentially harmful or useful cytokines" (1997) <i>Eur. J. Immunol.</i> 27:3420-3426.
120.	Lipford et al., "CpG-containing synthetic oligonucleotides promote B and cytotoxic T cell responses to protein antigen: a new class of vaccine adjuvants" (1997) <i>Eur. J. Immunol.</i> 27:2340-2344
121.	Liu et al., "Immunostimulatory CpG oligodeoxynucleotides enhance the immune response to vaccine strategies involving granulocyte-macrophage colony-stimulating factor" (1998) <i>Blood</i> 92:3730-3736
122.	Macfarlane et al., "Unmethylated CpG-containing oligodeoxynucleotides inhibit apoptosis in WEHI 231 B lymphocytes induced by several agents: evidence for blockade of apoptosis at a distal signalling step" (1997) <i>Immunology</i> 91:586-593
123.	Malley, Arthur, "The immune response of offspring mice from mothers immunized during pregnancy with protein antigens" (1989) <i>J. Reprod. Immunol.</i> 16:173-186
124.	Manzel et al., (1999) "Lack of immune stimulation by immobilized CpG-oligodeoxynucleotide" <i>Antisense Nucl. Acid Drug Dev.</i> 9:459-464.
125.	Martin-Orozco et al., "Enhancement of antigen-presenting cell surface molecules involved in cognate interactions by immunostimulatory DNA sequences" (1999) <i>Intnl Immunol.</i> 11(7):1111-1118
126.	Mbawuike et al., "Influenza: A subtype cross-protection after immunization of outbred mice with a purified chimeric NS ₁ /HA ₂ influenza virus protein" (1994) <i>Vaccine</i> 12(14):1340-1348

EXAMINER:	DATE CONSIDERED:
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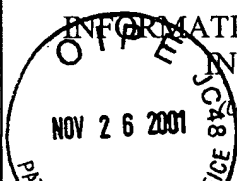
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	Applicant Gary VAN NEST et al.	
	Filing Date August 10, 2001	Group Art Unit 1632
	Mailing Date November 13, 2001	

127.	McCluskie et al., "Cutting edge: CpG DNA is a potent enhancer of systemic and mucosal immune responses against hepatitis B surface antigen with intranasal administration to mice" (1998) <i>J. Immunol.</i> 161(9):4463-4466
128.	Miller et al., "Syntheses and properties of adenine and thymine nucleoside alkyl phosphotriesters, the neutral analogs of dinucleoside monophosphates" (1971) <i>JACS</i> 93:6657-6665
129.	Mitragotri et al., "Ultrasound-mediated transdermal protein delivery" (1995) <i>Science</i> 269:850-853
130.	Mojcik et al., "Administration of a phosphorothioate oligonucleotide antisense to murine endogenous retroviral MCF <i>env</i> causes immune effects <i>in vivo</i> in a sequence-specific manner" (1993) <i>Clin. Immuno. and Immunopathol.</i> 67:130-136
131.	Moldoveanu et al., "CpG DNA, a novel immune enhancer for systemic and mucosal immunization with influenza virus" (1998) <i>Vaccine</i> 16:1216-1224
132.	Nelson et al. (1989) "A new and versatile reagent for incorporating multiple primary aliphatic amines into synthetic oligonucleotides" <i>Nucleic Acids Res.</i> 17(18):7179-7186.
133.	Nelson et al., "N3'→P5' oligodeoxyribonucleotide phosphoramidates: A new method of synthesis based on a phosphoramidite amino-exchange reaction," (1997) <i>J. Org. Chem.</i> 62:7278-7287.
134.	O'Shannessy et al., "Specific conjugation reactions of the oligosaccharide moieties of immunoglobulins" (1985) <i>J. Applied Biochem.</i> 7:347-355
135.	Pertmer et al., "Influenza virus nucleoprotein-specific immunoglobulin G subclass and cytokine responses elicited by DNA vaccination are dependent on the route of vector DNA delivery" (1996) <i>J. Virol.</i> 70:6119-6125
136.	Peyrottes et al., "Oligodeoxynucleoside phosphoramidates (P-NH ₂): synthesis and thermal stability of duplexes with DNA and RNA targets" (1996) <i>Nucleic Acids Res.</i> 24:1841-1848
137.	Pisetsky, David S., "The immunologic properties of DNA" (1996a) <i>J. Immunol.</i> 156:421-423
138.	Pisetsky, David S., "Immune activation by bacterial DNA: A new genetic code" (1996b) <i>Immunity</i> 5:303-310
139.	Pisetsky et al., "Stimulation of murine lymphocyte proliferation by a phosphorothioate oligonucleotide with antisense activity for herpes simplex virus" (1994) <i>Life Sci.</i> 54:101-107
140.	Pisetsky et al., "Immunological properties of bacterial DNA" DNA vaccines: A new era in vaccinology" (1995) <i>Ann. N.Y. Acad. Sci.</i> , 772:152-163
141.	Rafnar et al., "Cloning of <i>Amb a I</i> (antigen E), the major allergen family of short ragweed pollen" (1991) <i>J. Biol. Chem.</i> 266:1229-1236
142.	Raz et al., "Intradermal gene immunization: The possible role of DNA uptake in the induction of cellular immunity to viruses" (1994) <i>Proc. Natl. Acad. Sci. USA</i> 91:9519-9523

EXAMINER:	DATE CONSIDERED:
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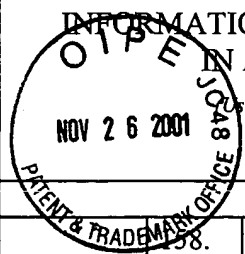
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	Filing Date August 10, 2001	Group Art Unit 1632
	Mailing Date November 13, 2001	

143.	Raz et al., "Preferential induction of a Th ₁ immune response and inhibition of specific IgE antibody formation by plasmid DNA immunization" (1996) <i>Proc. Natl. Acad. Sci. USA</i> 93:5141-5145
144.	Redford et al., "Cyclosporin A enhances IL-12 production by CpG motifs in bacterial DNA and synthetic oligodeoxynucleotides" (1998) <i>J. Immunol.</i> 161:3930-3935
145.	Rogers et al., "Recombinant <i>Fel d</i> I: Expression, purification, IgE binding and reaction with cat-allergic human T cells" (1993) <i>Mol. Immunol.</i> 30:559-568
146.	Roget et al., "Synthesis and use of labelled nucleoside phosphoramidite building blocks bearing a reporter group: biotinyl, dinitrophenyl, pyrenyl and dansyl" (1989) <i>Nucleic Acids Res.</i> 17:7643-7651
147.	Romagnani, S. (2000) "T-cell subsets (Th1 versus Th2) <i>Ann. Allergy Asthma Immunol.</i> 85:9-18.
148.	Roman et al., "Immunostimulatory DNA sequences function as T helper-1-promoting adjuvants" (1997) <i>Nature Medicine</i> 3:849-854
149.	Ruth, Jerry L., "Oligodeoxynucleotides with reporter groups attached to the base" (1991) <i>Oligonucleotides and Analogues: A Practical Approach</i> , Eckstein, ed., IRL Press, pp. 255-282
150.	Sato et al., "Immunostimulatory DNA sequences necessary for effective intradermal gene immunization" (1996) <i>Science</i> 273:352-354
151.	Schacht et al., (1996) "Biomedical applications of degradable polyphosphazenes" <i>Biotechnol. Bioeng.</i> 52:102-108.
152.	Scherle et al., "Functional analysis of influenza specific helper T cell clones <i>in vivo</i> " (1986) <i>J. Exp. Med.</i> 164:1114-1128
153.	Scherle et al., "Differential ability of B cells specific for external vs. internal influenza virus proteins to respond to help from influenza virus-specific T-cell clones <i>in vivo</i> " (1988) <i>Proc. Natl. Acad. Sci. USA</i> 85:4446-4450
154.	Schultz et al., "Oligo-2'-fluoro-2'-deoxynucleotide N3'→P5' phosphoramidates: synthesis and properties" (1996) <i>Nucleic Acids Res.</i> 24:2966-2973
155.	Schwartz et al., "CpG motifs in bacterial DNA cause inflammation in the lower respiratory tract" (1997) <i>J. Clin. Invest.</i> 100:68-73
156.	Shimada et al., " <i>In vivo</i> augmentation of natural killer cell activity with a deoxyribonucleic acid fraction of BCG" (1986) <i>Jpn. J. Cancer Res.</i> 77:808-816
157.	Sinha et al., "Oligonucleotides with reporter groups attached to the 5'-terminus" (1991) <i>Oligonucleotide Analogues: A Practical Approach</i> , Eckstein, ed., IRL Press, pp. 185-210

EXAMINER:	DATE CONSIDERED:
-----------	------------------

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	Applicant Gary VAN NEST et al.	
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	Mailing Date November 13, 2001	



158.	Sonehara et al., "Hexamer palindromic oligonucleotides with 5'-CG-3' motif(s) induce production of interferon" (1996) <i>J. Interferon and Cytokine Res.</i> 16:799-803
159.	Sparwasser et al., "Macrophages sense pathogens via DNA motifs: induction of tumor necrosis factor- α -mediated shock" (1997) <i>Eur. J. Immunol.</i> 27:1671-1679
160.	Spiegelberg et al., "Inhibition of IgE formation and allergic inflammation by allergen gene immunization and by CpG motif immunostimulatory oligodeoxynucleotides" (1998) <i>Allergy</i> 53:93-97
161.	Spiegelberg et al., "Inhibition of allergic inflammation in the lung by plasmid DNA allergen immunization" (1999) <i>Pediatric Pulmonology Suppl.</i> 18:118-121
162.	Stacey et al., "Macrophages ingest and are activated by bacterial DNA" (1996) <i>J. Immunol.</i> 157:2116-2122
163.	Staros et al., "Enhancement by <i>N</i> -hydroxysulfosuccinimide of water-soluble carbodiimide-mediated coupling reactions" (1986) <i>Anal. Biochem.</i> 156:220-222.
164.	Stein et al., "Chapter 11: Non-antisense effects of oligodeoxynucleotides" (1997) <i>Antisense Technology</i> , C. Lichtenstein and W. Nellen, eds., IRL Press, pp. 241-264.
165.	Stirchak et al., "Uncharged stereoregular nucleic acid analogs: 2. Morpholino nucleoside oligomers with carbamate internucleoside linkages" (1989) <i>Nucleic Acids Res.</i> 17:6129-6141
166.	Tamura et al., "Superior cross-protective effect of nasal vaccination to subcutaneous inoculation with influenza hemagglutinin vaccine" (1992) <i>Eur. J. Immunol.</i> 22:477-481
167.	Tamura et al., "Formulation of inactivated influenza vaccines for providing effective cross-protection by intranasal vaccination in mice" (1994) <i>Vaccine</i> 12:310-316
168.	Tokunaga et al., "Synthetic oligonucleotides with particular base sequences from the cDNA encoding proteins of <i>Mycobacterium bovis</i> BCG induce interferons and activate natural killer cells" (1992) <i>Microbiol. Immunol.</i> 36:55-66
169.	Tung et al., "Preparation of oligonucleotide-peptide conjugates" (1991) <i>Bioconjug. Chem.</i> 2:464-465
170.	Verhelvi, D. et al., (February 15, 2001) "Human peripheral blood cells differentially recognize and respond to two distinct CpG motifs" <i>J. Immunol.</i> 166(4):2372-2377.
171.	Wang et al., "Circular RNA oligonucleotides. Synthesis, nucleic acid binding properties, and a comparison with circular DNAs" (1994) <i>Nucleic Acids Res.</i> 22:2326-2333
172.	Warner et al., "Laboratory methods. Construction and evaluation of an instrument for the automated synthesis of oligodeoxyribonucleotides" (1984) <i>DNA</i> 3:401-411
173.	Weeratna et al. (1998) "Brief Communication: Reduction of antigen expression from DNA vaccines by coadministered oligodeoxynucleotides" <i>Antisense & Nucleic Acid Drug Development</i> 8:351-356.

EXAMINER:	DATE CONSIDERED:
-----------	------------------

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

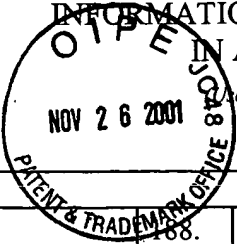
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	Mailing Date November 13, 2001	

174.	Weiner et al., "Immunostimulatory oligodeoxynucleotides containing the CpG motif are effective as immune adjuvants in tumor antigen immunization" (1997) <i>Proc. Natl. Acad. Sci. USA</i> 94:10833-10837
175.	Widhe, M. et al. (1998). "IgG subclasses in lyme borreliosis: A study of specific IgG subclass distribution in an interferon- γ -predominated disease," <i>Scand. J. Immunol.</i> 47:575-581.
176.	Wooldridge et al., "Immunostimulatory oligodeoxynucleotides containing CpG motifs enhance the efficacy of monoclonal antibody therapy of lymphoma" (1997) <i>Blood</i> 89:2994-2998
177.	Yamamoto et al., "Unique palindromic sequences in synthetic oligonucleotides are required to induce INF and augment INF-mediated natural killer activity" (1992) <i>J. Immunol.</i> 148:4072-4076
178.	Yamamoto et al. (1994) "Ability of oligonucleotides with certain palindromes to induce interferon production and augment natural killer cell activity is associated with their base length" <i>Antisense Research and Development</i> 4:119-122.
179.	Yamamoto et al., "Synthetic oligonucleotides with certain palindromes stimulate interferon production of human peripheral blood lymphocytes <i>in vitro</i> " (1994) <i>Jpn. J. Cancer Res.</i> 85:775-779
180.	Yanagawa et al., "Analysis of superhelical structures of nucleic acid-lipid conjugates by image processing" (1988) <i>Nucleic Acids Symp. Series</i> 19:189-192.
181.	Yi et al. (1996) "IFN- γ promotes IL-6 and IgM secretion in response to CpG motifs in bacterial DNA and oligonucleotides" <i>J. Immunol.</i> 156:558-564
182.	Yi et al., "CpG DNA rescue from anti-IgM-induced WEHI-231 B lymphoma apoptosis via modulation of $\text{I}\kappa\text{B}\alpha$ and $\text{I}\kappa\text{B}\beta$ and sustained activation of nuclear factor- $\kappa\text{B}/\text{c-Rel}$ " (1998) <i>J. Immunol.</i> 160:1240-1245
183.	Yi et al., "CpG motifs in bacterial DNA activate leukocytes through the pH-dependent generation of reactive oxygen species" (1998) <i>J. Immunol.</i> 160:4755-4761
184.	Yi et al., "CpG oligodeoxynucleotides rescue mature spleen B cells from spontaneous apoptosis and promote cell cycle entry" (1998) <i>J. Immunol.</i> 160:5898-5906
185.	Yi et al., "Cutting edge: Rapid induction of mitogen-activated protein kinases by immune stimulatory CpG DNA" (1998) <i>J. Immunol.</i> 161:4493-4497
186.	Zhao et al., "Effect of different chemically modified oligodeoxynucleotides on immune stimulation" (1996) <i>Biochem. Pharmacol.</i> 51:173-182
187.	Zon, Gerald, "Oligonucleoside phosphorothioates" Protocols for Oligonucleotides and Analogs, Chapter 8 in <i>Methods in Molecular Biology</i> , Volume 20 (1993) pp. 165-189

EXAMINER:	DATE CONSIDERED:
-----------	------------------

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	Mailing Date November 13, 2001	



188.	Zimmermann et al., "Cutting edge: CpG oligodeoxynucleotides trigger protective and curative Th1 responses in lethal murine leishmaniasis" (1998) <i>J. Immunol.</i> 3627-3630
189.	Zuckermann et al., "Efficient methods for attachment of thiol specific probes to the 3'-ends of synthetic oligodeoxyribonucleotides" (1987) <i>Nucleic Acids Res.</i> 15:5305-5321

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EXAMINER:	DATE CONSIDERED:
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